

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An apparatus for determining leakage in an evaporated fuel processing system, the evaporated fuel processing system extending from a fuel tank to a purge passage through which evaporated fuel from the fuel tank is purged to an intake manifold of an engine, the apparatus comprising:

a system pressure sensor for detecting a pressure of the evaporated fuel processing system;

an atmospheric pressure sensor for detecting an atmospheric pressure;

a control unit connected to the system pressure sensor and the atmospheric pressure sensor, the control unit configured to:

detect a stop of the engine;

correct a determination value according to the atmospheric pressure;

close the evaporated fuel processing system after the stop of the engine is detected; and

determine whether the evaporated fuel processing system has leakage after the evaporated fuel processing system is closed based on the pressure detected by the system pressure sensor and the corrected determination value,

wherein the correction for the determination value is made so that the determination value is made larger as the atmospheric pressure decreases.

2. (Original) The apparatus of claim 1, wherein the control unit is further configured to:

monitor the pressure detected by the system pressure sensor;

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determine a change in the pressure detected by the system pressure sensor; and
determine that the evaporated fuel processing system has leakage if the change in the pressure detected by the system pressure sensor is less than the corrected determination value.

3. (Cancelled).

4. (Original) The apparatus of claim 1, further comprising a table in which a coefficient corresponding to the atmospheric pressure is defined,

wherein the control unit is further configured to:

retrieve the coefficient corresponding to the atmospheric pressure from the table;

and

correct the determination value with the retrieved coefficient.

5. (Original) The apparatus of claim 1, wherein the control unit is further configured to:
open the evaporated fuel processing system to the atmosphere if the stop of the engine is detected;

close the evaporated fuel processing system over a first determination period;

determine a maximum value of the pressure detected by the system pressure sensor during the first determination period;

open the evaporated fuel processing system to the atmosphere after the first determination period elapses;

close the evaporated fuel processing system over a second determination period;

determine a minimum value of the pressure detected by the system pressure sensor during the second determination period; and

determine that the evaporated fuel processing system has leakage if a difference between the maximum value and the minimum value is less than the corrected determination value.

6. (Currently Amended) An apparatus for determining leakage in an evaporated fuel processing system, the evaporated fuel processing system extending from a fuel tank to a purge passage through which evaporated fuel from the fuel tank is purged to an intake manifold of an engine, the apparatus comprising:

a system pressure sensor for detecting a pressure of the evaporated fuel processing system;

an atmospheric pressure sensor for detecting an atmospheric pressure; and

a control unit connected to the system pressure sensor and the atmospheric pressure sensor, the control unit configured to:

detect a stop of the engine;

determine a coefficient corresponding to the atmospheric pressure;

correct the pressure detected by the system pressure sensor ~~according to the atmospheric pressure~~ with the determined coefficient;

close the evaporated fuel processing system after the stop of the engine is detected; and

determine whether the evaporated fuel processing system has leakage after the evaporated fuel processing system is closed based on the corrected pressure and a determination value.

7. (Original) The apparatus of claim 6, wherein the control unit is further configured to:
monitor the corrected pressure;
determine a change in the corrected pressure; and
determine that the evaporated fuel processing system has leakage if the change in the corrected pressure is less than the determination value.

8. (Original) The apparatus of claim 6, wherein the correction for the pressure detected by the system pressure sensor is made so that the pressure is made lower as the atmospheric pressure decreases.

9. (Currently Amended) The apparatus of claim 6, further comprising a table in which [a]
the coefficient corresponding to the atmospheric pressure is defined,

wherein the control unit is further configured to:

retrieve the coefficient corresponding to the atmospheric pressure from the table;

and

~~correct the pressure detected by the system pressure sensor with the retrieved~~
coefficient.

10. (Original) The apparatus of claim 6, wherein the control unit is further configured to:
open the evaporated fuel processing system to the atmosphere if the stop of the engine is detected;

close the evaporated fuel processing system over a first determination period;

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determine a maximum value of the corrected pressure during the first determination period;

open the evaporated fuel processing system to the atmosphere after the first determination period elapses;

close the evaporated fuel processing system over a second determination period;

determine a minimum value of the corrected pressure during the second determination period; and

determine that the evaporated fuel processing system has leakage if a difference between the maximum value and the minimum value is less than the determination value.

11. (Currently Amended) A method for determining leakage in an evaporated fuel processing system, the evaporated fuel processing system extending from a fuel tank to a purge passage through which evaporated fuel from the fuel tank is purged to an intake manifold of an engine, comprising the steps of:

detecting a pressure of the evaporated fuel processing system;

detecting an atmospheric pressure;

detecting a stop of the engine;

correcting a determination value according to the atmospheric pressure, said step of correcting the determination value comprising correcting the determination value so that the determination value is made larger as the atmospheric pressure decreases;

closing the evaporated fuel processing system after the stop of the engine is detected; and

determining whether the evaporated fuel processing system has leakage after the evaporated fuel processing system is closed based on the detected pressure of the evaporated fuel processing system and the corrected determination value.

12. (Original) The method of claim 11, further comprising the steps of:
monitoring the pressure of the evaporated fuel processing system;
determining a change in the pressure of the evaporated fuel processing system; and
determining that the evaporated fuel processing system has leakage if the change in the pressure of the evaporated fuel processing system is less than the corrected determination value.

13. (Cancelled).

14. (Original) The method of claim 11, further comprising the steps of:
accessing a table in which a coefficient corresponding to the atmospheric pressure is defined;
retrieving the coefficient corresponding to the atmospheric pressure from the table; and
correcting the determination value with the retrieved coefficient.

15. (Original) The method of claim 11, further comprising the steps of:
opening the evaporated fuel processing system to the atmosphere if the stop of the engine is detected;
closing the evaporated fuel processing system over a first determination period;

determining a maximum value of the pressure of the evaporated fuel processing system during the first determination period;

opening the evaporated fuel processing system to the atmosphere after the first determination period elapses;

closing the evaporated fuel processing system over a second determination period;

determining a minimum value of the pressure of the evaporated fuel processing system during the second determination period; and

determining that the evaporated fuel processing system has leakage if a difference between the maximum value and the minimum value is less than the corrected determination value.

16. (Currently Amended) A method for determining leakage in an evaporated fuel processing system, the evaporated fuel processing system extending from a fuel tank to a purge passage through which evaporated fuel from the fuel tank is purged to an intake manifold of an engine, comprising the steps of:

detecting a pressure of the evaporated fuel processing system;

detecting an atmospheric pressure;

detecting a stop of the engine;

correcting the detected pressure of the evaporated fuel processing system according to the atmospheric pressure, said step of correcting the detected pressure of the evaporated fuel processing system comprising determining a coefficient corresponding to the atmospheric pressure and correcting the detected pressure of the evaporated fuel processing system with the determined coefficient;

closing the evaporated fuel processing system after the stop of the engine is detected; and
determining whether the evaporated fuel processing system has leakage after the
evaporated fuel processing system is closed based on the corrected pressure and a determination
value.

Claims 17-22. (Cancelled).

23. (Currently Amended) An apparatus for determining leakage in an evaporated fuel
processing system, the evaporated fuel processing system extending from a fuel tank to a purge
passage through which evaporated fuel from the fuel tank is purged to an intake manifold of an
engine, the apparatus comprising:

means for detecting a pressure of the evaporated fuel processing system;

means for detecting an atmospheric pressure;

means for detecting a stop of the engine;

means for correcting a determination value according to the atmospheric pressure, the

means for correcting a determination value comprises means for correcting the determination
value so that the determination value is made larger as the atmospheric pressure decreases;

means for closing the evaporated fuel processing system after the stop of the engine is
detected; and

means for determining whether the evaporated fuel processing system has leakage after
the evaporated fuel processing system is closed based on the pressure detected by the system
pressure sensor and the corrected determination value.

24. (Original) The apparatus of claim 23, further comprising:

means for monitoring the pressure of the evaporated fuel processing system;

means for determining a change in the pressure of the evaporated fuel processing system;

and

means for determining that the evaporated fuel processing system has leakage if the change in the pressure of the evaporated fuel processing system is less than the corrected determination value.

25. (Cancelled).

26. (Original) The apparatus of claim 23, further comprising:

means for accessing a table in which a coefficient corresponding to the atmospheric pressure is defined,

means for retrieving the coefficient corresponding to the atmospheric pressure from the table; and

means for correcting the determination value with the retrieved coefficient.

27. (Original) The apparatus of claim 23, further comprising:

means for opening the evaporated fuel processing system to the atmosphere if the stop of the engine is detected;

means for closing the evaporated fuel processing system over a first determination period;

means for determining a maximum value of the pressure of the evaporated fuel processing system during the first determination period;

means for opening the evaporated fuel processing system to the atmosphere after the first determination period elapses;

means for closing the evaporated fuel processing system over a second determination period;

means for determining a minimum value of the pressure of the evaporated fuel processing system during the second determination period; and

means for determining that the evaporated fuel processing system has leakage if a difference between the maximum value and the minimum value is less than the corrected determination value.

28. (Currently Amended) An apparatus for determining leakage in an evaporated fuel processing system, the evaporated fuel processing system extending from a fuel tank to a purge passage through which evaporated fuel from the fuel tank is purged to an intake manifold of an engine, the apparatus comprising:

means for detecting a pressure of the evaporated fuel processing system;

means for detecting an atmospheric pressure;

means for detecting a stop of the engine;

means for correcting the detected pressure of the evaporated fuel processing system according to the atmospheric pressure, the means for correcting the detected pressure of the evaporated fuel processing system according to the atmospheric pressure comprises means for

determining a coefficient corresponding to the atmospheric pressure and means for correcting the detected pressure of the evaporated fuel processing system with the determined coefficient;

means for closing the evaporated fuel processing system after the stop of the engine is detected; and

means for determining whether the evaporated fuel processing system has leakage after the evaporated fuel processing system is closed based on the corrected pressure and a determination value.